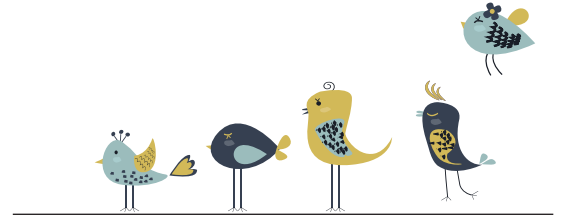# ILLUSTRATING WHOLE NUMBER BY FRACTION PRODUCTS

A number line is a great way to Illustrate fractions as a product of a whole number and a fraction.
Using a three step process, it's easy and fun!

EXAMPLE: $\dfrac{3}{7}$

STEP 1: Establish the whole number of the two factors:

Look to the fraction's numerator to find the whole number factor. ⟶ $\dfrac{3}{7}$ $3 \times \mathbf{?} = \dfrac{3}{7}$ We identify 3 (the numerator) as the whole number factor.

STEP 2: Establish the unit fraction of the two factors:

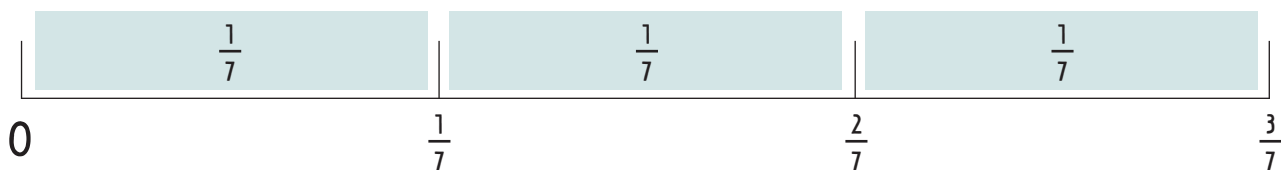Look to the fraction's denominator to find the unit fraction factor. ⟶ $\dfrac{3}{7}$ $3 \times \dfrac{1}{7} = \dfrac{3}{7}$ We identify 7 (the denominator) as the unit fraction for individual partitions: represented as $\dfrac{1}{7}$ each.

Write the equivalent addition sentence, to reinforce understanding: $\dfrac{1}{7} + \dfrac{1}{7} + \dfrac{1}{7} = \dfrac{3}{7}$

STEP 3: Illustrate the number sentence: $3 \times \dfrac{1}{7} = \dfrac{3}{7}$ on the number line, as demonstrated below:

$\dfrac{1}{7}$	$\dfrac{1}{7}$	$\dfrac{1}{7}$

0            $\dfrac{1}{7}$ $\dfrac{2}{7}$ $\dfrac{3}{7}$

There are 3 sections where each section is in $\dfrac{1}{7}$ unit fractions.
And the best part is: the total length is the fraction as a product!

$3 \times \dfrac{1}{7} = \dfrac{3}{7}$ and $\dfrac{1}{7} + \dfrac{1}{7} + \dfrac{1}{7} = \dfrac{3}{7}$
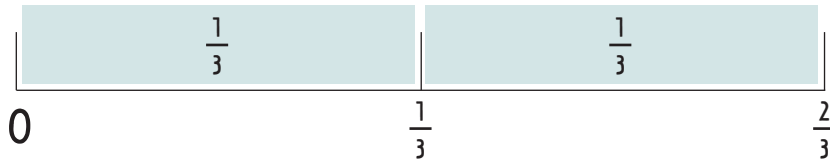
ILLUSTRATING WHOLE NUMBER BY FRACTION PRODUCTS

A number line is a great way to Illustrate fractions as a product of a whole number and a fraction. Using a three step process, it's easy and fun!
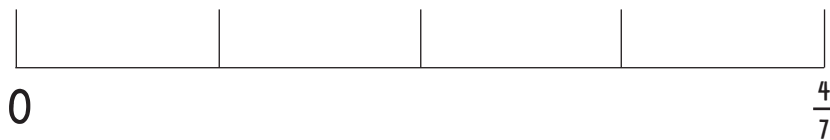
EXAMPLE: $\frac{2}{3}$

| $\frac{1}{3}$ | $\frac{1}{3}$ |

0          $\frac{1}{3}$ $\frac{2}{3}$

$2 \times \frac{1}{3} = \frac{2}{3}$

$\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$

1. $\frac{5}{8}$

0                              $\frac{5}{8}$

2. $\frac{4}{7}$

0                              $\frac{4}{7}$

3. $\frac{3}{4}$

0                              $\frac{3}{4}$

4. $\frac{1}{2}$

0                              $\frac{1}{2}$

TAKE A CLOSER LOOK! What would be the number sentences for $\frac{1}{7}$ and $\frac{2}{7}$ if each were a product of a whole number and a fraction?